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FINAL YEAR PROJECT (EEE368)

WIRELESS GAS DETECTOR USING ARDUINO

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ABSTRACT

This project shows the development of a smoke alerting system. Many infrastructures or buildings have been lost because of the fire in the building. As a result, millions of losses have been reported caused by this phenomenon. In this globalization era, smoke detectors can be improved by using the Internet of Things (IoT) because the IoT is well-known in this era. The objectives of this project are to design a prototype of a wireless smoke detector using proteus design and to develop a smoke alarm system using IoT technology. This project aims to design a wireless smoke detector using IoT and Arduino Microcontroller. The block diagram for a wireless smoke detector shows a smoke sensor, an Arduino board, an LCD screen, a buzzer, an LED, and an IoT module. The data is processed by Arduino and displayed on the LCD after the gas sensor detects smoke. While the IoT module provides remote monitoring and control, the buzzer and LED inform the user. The simulation model has been constructed using Tinkercad software and where the coding was designed. May this project will be used widely among humans to avoid property damage, injuries, human death and reduce losses.

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CHAPTER 1

INTRODUCTION

1.1 Background

Since the beginning of recorded history, humanity has acknowledged the existence of fire, which carries with it both possible advantages and inherent dangers. The deliberate and regulated use of fire has been essential to human advancement for a variety of uses, including manufacturing, cooking, and warmth. But this fundamental energy also has a negative side that, if unregulated, may do catastrophic harm to people, property, and the environment.

The understanding of fire threats is still an essential part of day-to-day living in the modern world. The elemental force of fire remains a double-edged sword in spite of technical breakthroughs and modern conveniences, requiring careful procedures for both its controlled application and the mitigation of possible threats.

The smoke detector is a vital piece of equipment in the fight against uncontrolled fires. It is made to detect the presence of smoke and frequently acts as an early warning system for impending fire breakouts. Household smoke detectors, sometimes called smoke alarms, are essential for guaranteeing people's safety in a home. When smoke is detected, these devices usually sound an auditory or visual alert locally. Multiple smoke detectors work together in networked systems to send out a coordinated alert, increasing the alarm system's overall efficacy.